

**Flood Control Project Maintenance
Levee Inspections**

Fall 2018 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

Sacramento River Basin

RD0787	Overall LMA Rating	Total LMA Miles						
Reclamation District No. 0787 Fair	A	4.45						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Supplemental</i>								
DWR UCIP Field Study					0.01			
2017 Storm Damage	0.13		0.13	2.92%				
<i>LMA Totals:</i>	0.13	0.00	0.13	2.92%	0.01	0.00	0.00	0.00

Unit No. 01 Colusa Basin Drain LB	Overall Unit Rating	Total Unit Miles						
RD0787	A	4.45						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence	
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles
<i>Supplemental</i>								
DWR UCIP Field Study					0.01			
2017 Storm Damage	0.13		0.13	2.92%				
<i>Unit Totals:</i>	0.13	0.00	0.13	2.92%	0.01	0.00	0.00	0.00

**Flood Control Project Maintenance
Levee Inspections**
LMA District Cover Sheet
Fall 2018 Levee Inspection Results

Reclamation District No. 0787 Fair

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)
† Overall LMA Rating (Fall Only)			A	

** Non-receipt of Summer or Winter Inspection
Reports may effect overall annual rating.

† SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports. This rating is not intended to be an indication of risk.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2018 Levee Inspection Results

Reclamation District No. 0787 Fair

Waterway			Bank	Unit Miles
Unit No. 01 Colusa Basin Drain			Left	4.45
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	3/16/2018 - 3/16/2018		10/9/2018 - 10/9/2018	
DWR Inspector	Zach Jojola		Zach Jojola	
Accompanied By	Roger Cornwell Rivergarden Farms RD 787			

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Reclamation District No. 0787 Fair

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/09/2018 10/09/2018	Zach Jojola

LM Start		Rating **	A	Issue No.	7
LM End		Issue Type +	Ma	Location *	N/A
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Emergency Supplies & Equipment			°	°
				°	°
DWR ID	DWR_RD0787_01_s_2013_7				
Comment Code					
Inspector Comment					
RD 787 shares flood resources with RD 108 with a stockpile of flood response materials.					

No Photos

LM Start		Rating **	A	Issue No.	8
LM End		Issue Type +	Ma	Location *	N/A
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Operations & Maintenance Manuals			°	°
				°	°
DWR ID	DWR_RD0787_01_s_2013_8				
Comment Code					
Inspector Comment					
RD 787 is current with O&M manuals.					

No Photos

LM Start		Rating **	A	Issue No.	10
LM End		Issue Type +	Ma	Location *	N/A
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Flood Preparedness & Training			°	°
				°	°
DWR ID	DWR_RD0787_01_s_2012_10				
Comment Code					
Inspector Comment					
RD 787 works jointly with RD 108 on training and flood response.					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Reclamation District No. 0787 Fair

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/09/2018 10/09/2018	Zach Jojola

LM Start	0.04	Rating **	M	Issue No.	23
LM End	0.04	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			38.799159°	38.799159°
				-121.725874°	-121.725874°
DWR ID	22892				
Comment Code					
Inspector Comment					
FS_ID:37585 DS_ID:22892 EP_NO: 9392 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Dense vegetation limits the inspector's visibility to identify signs of pipe failure (leaks) along the slope. Recommend removing vegetation along pipe alignment to conduct proper inspection of structure. FIELD_STRUCT_DESC: 36-inch concrete irrigation pipe through the levee, 17 feet below the crown. Slide gate in 36-inch standpipe on the waterside (WS). 24-inch pipe from standpipe to pump house mounted on steel structure in channel. (36-inch pipe authorized under Automatic Board Order (ABO) issued as Permit No. 9392, 1974 - River Garden Farms; pump structure and 24-inch steel pipe authorized under Permit No. 3878, 1962-River Farms Company of California). [Additional Reference(s): DWR Levee Logs, 1990] FS Date: 6/10/2014					

LM Start	0.04	Rating **	M	Issue No.	23 (cont)
LM End	0.04	Issue Type +	En	Location *	

Photo 1 of 3 : UCIP_FA_2018_37585_68154.jpg



View of landward slope.

Photo 2 of 3 : UCIP_FA_2018_37585_68153.jpg



View of landward side.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Reclamation District No. 0787 Fair

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/09/2018 10/09/2018	Zach Jojola

LM Start	0.04	Rating **	M	Issue No.	23 (cont)	
LM End	0.04	Issue Type +	En	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP Field Study			38.799159°	38.799159°	
				-121.725874°	-121.725874°	
DWR ID	22892					
Comment Code						
Inspector Comment						
FS_ID:37585 DS_ID:22892 EP_NO: 9392 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Dense vegetation limits the inspector's visibility to identify signs of pipe failure (leaks) along the slope. Recommend removing vegetation along pipe alignment to conduct proper inspection of structure. FIELD_STRUCT_DESC: 36-inch concrete irrigation pipe through the levee, 17 feet below the crown. Slide gate in 36-inch standpipe on the waterside (WS). 24-inch pipe from standpipe to pump house mounted on steel structure in channel. (36-inch pipe authorized under Automatic Board Order (ABO) issued as Permit No. 9392, 1974 - River Garden Farms; pump structure and 24-inch steel pipe authorized under Permit No. 3878, 1962-River Farms Company of California). [Additional Reference(s): DWR Levee Logs, 1990] FS Date: 6/10/2014						

Photo 3 of 3 : UCIP_FA_2018_37585_68156.jpg



View of waterward side.

LM Start	0.39	Rating **	A/W	Issue No.	2
LM End	0.50	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.795931 °	38.795268 °
				-121.730627 °	-121.732566 °
DWR ID	DWR_RD0787_01_f_2018_2				
Comment Code					
Inspector Comment					
2017 Site ID: CBD 0.5 L					
Status: Eroding					
2017 Field Notes: Wide levee section, roughly 40 ft.					
Site History: 2011 - Large scallops throughout the entire reach. Toe scour due to tree pop-outs, resulting in a steepening slope. The reduced resistive forces plus clay levee may increase the loading.					
Additional erosion due to human use.					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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Levee Inspection Report By Mile - Fall 2018

Reclamation District No. 0787 Fair

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/09/2018 10/09/2018	Zach Jojola

LM Start	0.60	Rating **	C	Issue No.	20
LM End	0.60	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.795492°	38.795492°
				-121.734410°	-121.734410°
DWR ID	DWR_RD0787_01_f_2017_20				
Comment Code					
TR : Tree or limb					
Inspector Comment					
Fallen tree on waterside slope.					

No Photos

LM Start	0.67	Rating **	A/W	Issue No.	3
LM End	0.85	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey, DRAFT			38.795486 °	38.796225 °
				-121.735647 °	-121.738902 °
DWR ID	DWR_RD0787_01_f_2018_3				
Comment Code					
Inspector Comment					
2017 Site ID: CBD 0.9 L					
Status: Eroding					
2017 Field Notes: Oversized embankment.					
Site History: 2011 - Large scallops throughout the entire reach. Toe scour due to tree pop-outs, resulting in a steepening slope. The reduced resistive forces plus clay levee may increase the loading.					

No Photos

LM Start	0.71	Rating **	C	Issue No.	22
LM End	0.71	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			38.795685 °	38.795685 °
				-121.736317 °	-121.736317 °
DWR ID	DWR_RD0787_01_s_2018_22				
Comment Code					
PR : Prunings					
Inspector Comment					

No Photos

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable		N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Reclamation District No. 0787 Fair

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/09/2018 10/09/2018	Zach Jojola

LM Start	0.73	Rating **	M	Issue No.	4
LM End	0.86	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 Storm Damage			38.795769 °	38.796340 °
				-121.736798 °	-121.738956 °
DWR ID	DWR_RD0787_01_f_2017_4				
Comment Code					
Inspector Comment					
Levee Evaluation Comments					
Description:					
Site ID No:182					
Site Designation:RD 787-01					
Repair Type: Erosion					
Rating:Area of Concern					
Field Date:7/18/2017					
Notes:					

Photo 1 of 3 : LEVAL_FA_2018_182_1520.jpg



LM Start	0.73	Rating **	M	Issue No.	4 (cont)
LM End	0.86	Issue Type +	Ma	Location *	

Photo 2 of 3 : LEVAL_FA_2018_182_1522.jpg

*** Location**

LS : Land Side N/A : Not Applicable
 WS : Water Side
 CR : Crown

**** Rating**

A : Acceptable N : Not Inspected/Rated
 M : Minimally Acceptable C : Corrected
 U : Unacceptable A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiency
 Ob : Design & System Obsolescence
 En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Reclamation District No. 0787 Fair

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/09/2018 10/09/2018	Zach Jojola

LM Start	0.73	Rating **	M	Issue No.	4 (cont)	
LM End	0.86	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	2017 Storm Damage			38.795769 °	38.796340 °	
				-121.736798 °	-121.738956 °	
DWR ID	DWR_RD0787_01_f_2017_4					
Comment Code						
Inspector Comment						
Levee Evaluation Comments						
Description:						
Site ID No:182						
Site Designation:RD 787-01						
Repair Type: Erosion						
Rating:Area of Concern						
Field Date:7/18/2017						
Notes:						

Photo 3 of 3 : LEVAL_FA_2018_182_1523.jpg



LM Start	0.73	Rating **	A/W	Issue No.	9
LM End	0.73	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.795814 °	38.795814 °
				-121.736799 °	-121.736799 °
DWR ID	DWR_RD0787_01_s_2017_9				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					
Erosion on the waterside slope from 2017 storms. Recommend monitoring.					

Photo 1 of 4 : FA_2018_RD0787_212_9_20181011_00013.jpg



View of erosion on the waterside slope, facing upstream. Fall 2018.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Reclamation District No. 0787 Fair

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/09/2018 10/09/2018	Zach Jojola

LM Start	0.73	Rating **	A/W	Issue No.	9 (cont)	
LM End	0.73	Issue Type +	Ma	Location *	WS	
Category	Earthen Levee			GPS Latitude/Longitude		
				Start		End
Item	Erosion / Bank Caving			38.795814 °	38.795814 °	
				-121.736799 °	-121.736799 °	
DWR ID	DWR_RD0787_01_s_2017_9					
Comment Code						
E1 : Note and monitor erosion site.						
Inspector Comment						
Erosion on the waterside slope from 2017 storms. Recommend monitoring.						

LM Start	0.73	Rating **	A/W	Issue No.	9 (cont)
LM End	0.73	Issue Type +	Ma	Location *	WS

Photo 2 of 4 : FA_2018_RD0787_212_9_20181011_00012.jpg



Additional view of erosion, facing upstream. Fall 2018.

Photo 3 of 4 : FA_2018_RD0787_212_9_20181011_00014.jpg



View of erosion, facing downstream. Fall 2018.

LM Start	0.73	Rating **	A/W	Issue No.	9 (cont)
LM End	0.73	Issue Type +	Ma	Location *	WS

Photo 4 of 4 : FA_2018_RD0787_212_9_20180904_00004.jpg



View of what appears to be a slope stability issue on waterside slope.
Spring 2017.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2018

Reclamation District No. 0787 Fair

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Colusa Basin Drain	Left	4.45	10/09/2018 10/09/2018	Zach Jojola

LM Start	0.75	Rating **	A/W	Issue No.	12
LM End	0.75	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.795891°	38.795891°
				-121.737098°	-121.737098°
DWR ID	DWR_RD0787_01_f_2017_12				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					
Erosion on the waterside slope from 2017 storms. Recommend monitoring.					

LM Start	0.75	Rating **	A/W	Issue No.	12 (cont)
LM End	0.75	Issue Type +	Ma	Location *	WS

Photo 1 of 3 : FA_2018_RD0787_212_12_20181011_00015.jpg



View of erosion on the waterside slope, facing downstream. Fall 2018.

Photo 2 of 3 : FA_2018_RD0787_212_12_20181011_00016.jpg



View of the erosion the waterside slope, facing upstream. Fall 2018.

LM Start	0.75	Rating **	A/W	Issue No.	12 (cont)
LM End	0.75	Issue Type +	Ma	Location *	WS

Photo 3 of 3 : FA_2018_RD0787_212_12_20180904_00005.jpg



View of what appears to be a slope stability issue on waterside slope.
Spring 2017.

* Location LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown		** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain		+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement	
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Reclamation District No. 0787 Fair

LM Start	0.77	Rating **	A/W	Issue No.	15 (cont)
LM End	0.77	Issue Type +	Ma	Location *	WS



View of erosion on the waterside slope, facing downstream. Fall 2018.



View of sloughing on waterside slope. Spring 2017.

LM Start	0.78	Rating **	A/W	Issue No.	16
LM End	0.78	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.796042 °	38.796042 °
				-121.737661 °	-121.737661 °
DWR ID	DWR_RD0787_01_s_2017_16				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					
Erosion on the waterside slope from 2017 storms. Recommend monitoring.					



View of erosion on the waterside slope, facing downstream. Fall 2018.

* Location	** Rating	+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable N : Not Inspected/Rated M : Minimally Acceptable C : Corrected U : Unacceptable A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement

Reclamation District No. 0787 Fair

Photo 2 of 2 : FA_2018_RD0787_212_16_20180904_00007.jpg



View of what appears to be sloughing on the waterside slope. Spring 2017.

No Photos

No Photos

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